

IDENTIFIED BLM ISSUES

FOR THE

HELLS CANYON COMPLEX OF DAMS

FERC RELICENSING

December 1999

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AQUATIC ISSUES

Issue: # 1 Bull Trout populations and habitat.

What are the effects from the Hells Canyon complex on bull trout viability in the Snake River and its tributaries? BLM recognizes the significance of bull trout to Native Americans.

Questions:

Within Complex

1. What are the relative abundance, age, size, and distribution of bull trout?
2. What are the effects of reservoir drawdowns on bull trout habitat?
3. Can fish access tributary habitat with reservoir drawdown fluctuations, fluctuating mainstream river levels, and the slope of debris fans?
4. What is the interaction between native and introduced resident fish species in the reservoirs?
5. How have bull trout genetic interactions changed with the completion of HCC?
6. What are the effects of changes to the bull trout food chain with the loss of anadromous fish runs?
7. Do bull trout utilize the reservoirs and for what part of their life cycle?
8. Do fluvial and resident bull trout occur in historic habitat on BLM lands in the project area?
9. What is the economic value (both commercial and non commercial) of selected aquatic species (bull trout and others) within the complex?
10. Since the development of the reservoirs, what have been the factors that influence change in fishing activities within the complex? What affect has this had on the local communities (economic activity)?

Main Stem Snake River and Tributaries Below Hells Canyon Dam (Salmon River to Grande Ronde)

1. What is the relative abundance, age, size, and distribution of bull trout.
2. What are the effects of flow fluctuations and changes in water temperatures on bull trout in the mainstream of the Snake River and tributaries below Hells Canyon Dam. (Salmon River to Grande Ronde)?
3. What are the habitat conditions for bull trout and other native species of the mainstream of the Snake River below Hells Canyon Dam?
4. What are the habitat conditions of the tributaries below Hells Canyon Dam?
5. When do bull trout utilize the mainstream of the Snake River?
6. What is the economic value (both commercial and non commercial) of selected aquatic species (bull trout and others) along the main stem?
7. Since the development of the dams, what have been the factors that influence change in fishing activities along the main stem? What affect has this had on the local communities (economic activity)?

Scope:

Bull Trout occur from the Weiser River, through the complex, to the mouth of Captain John Creek, including Imnaha River, Salmon River, and many tributaries.

Bull trout are known to occur on BLM lands in the Snake River and the following tributaries:

Cascade RA- Wildhorse and Indian Creek
Baker RA- Pine Creek and Grande Ronde River
Cottonwood RA- Salmon River

There is potentially additional historic habitat on BLM lands.

Existing Guidance:

Cascade RMP (August 1987)

Pg. 53 says: On high priority streams providing habitat for species of special concern, management practices will be designed to maintain the integrity of or improve those habitats.

Pg. 48 says: Habitat to support viable populations of all native wildlife species present in the resource area will be maintained.

Pg. 48 says: Proposed actions which may adversely affect sensitive species will be modified to avoid adverse impacts or will provide mitigation for unavoidable adverse impacts.

Baker RMP (July 1989)

Pg. 12 says: The RMP establishes the priority of all resource allocations and specifies threatened or Endangered Species as first priority.

Pg. 12 says: The RMP identifies the Big Lookout Mtn. Geographic Unit as first priority for resource values to manage including wildlife, fisheries, watershed, recreation, range, minerals, forestry and cultural.

Pg. 18 says: The RMP says to maintain or enhance anadromous and resident fish and increase habitat productivity.

Pg. 19 says: The RMP specifies no action will be taken by BLM that could jeopardize the continual existence of any federally listed, threatened or endangered plant or animal species. Furthermore it says, avoid management actions which may result in distribution and adverse impacts on critical habitat.

Pg. 57 says: Resource condition objectives are to (1) maintain/ improve habitat for fisheries management actions and to (2) monitor fish habitat conditions and trend on Connor Creek.

Chief Joseph MFP (November 1981)

Sections II-35 & II-36 specifies that management actions may include imposing use restrictions, rehabilitation of streambanks, and cooperative planning for the entire stream. It also says that Management will adhere to District watershed buffer guidelines and best management practices.®

Chief Joseph MFP Refinement (September 1985)

Fisheries/Water Quality Objectives and Sediment Budgets: Defines management objectives for fisheries in the watersheds, rivers, and streams within the Cottonwood Field Office's area of responsibility, all of which are tributary to the Snake River. The ability of the anadromous fish addressed in this plan to migrate to and from the ocean is directly impacted by the operation of the HCC.

BLM Policy

Manual 6840 provides policy and guidance to conserve the species and their ecosystems and to ensure that actions authorized on BLM administered lands do not contribute to the need to list any other species. This is based on the following authorities:

Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.), as amended.

Sikes Act, Title II (16 U.S.C. 670 et seq.), as amended.

The Federal Land Policy and Management Act of October 21, 1976 (43 U.S.C. 1701).

Departmental Manual 235.1.1.A., general Program Delegation, Director, Bureau of Land Management.

Additional Requirements:

PACFISH- Adopted Feb 1995

INFISH- Adopted Feb 1995

Provide interim aquatic conservation strategies to ensure BLM & USFS actions conserve aquatic resources and avoid additional federal listings of endangered species

Biological assessments for all BLM land use plans in the area of listed Chinook Salmon, Steelhead and Bull trout were submitted and subsequent biological opinions received from FWS and NMFS that provide specific terms and conditions for the management and recovery of the listed species.

Desired Future Conditions:

Sustain and enhance native wild runs of bull trout on BLM lands.

Issue: # 2 Anadromous Salmonid Populations and Habitat.

What are the effects of the Hells Canyon Complex on the viability of anadromous salmonid populations and habitat in the Snake River? BLM recognizes the importance of anadromous populations to Native Americans.

Questions:

1. What are the effects of flow fluctuations on anadromous fish habitat, juvenile fish, and redds in the main stem of the Snake River and tributaries below Hells Canyon Dam?
2. What are the habitat conditions of the main stem of the Snake River below Hells Canyon Dam to the Grande Ronde River?
3. What are the habitat conditions of Salmon River, Grande Ronde River, Imnaha River, and Big Sheep Creek for the runs displaced by dams?
4. Can fish access tributary habitat with fluctuating main stem river levels, and the slope of debris fans?
5. What have been the changes to the wildlife food chain and nutrient cycling in freshwater with the loss/decline of the anadromous fish runs?
6. How has the hatchery program affected wild fish runs?
7. What is the potential to restore anadromous fish runs through Hells Canyon Complex?
8. What is the potential economic value of anadromous fish if populations are increased?
9. What changes need to occur and what are the costs to increasing anadromous fish populations on the main stem of the Snake River and tributaries below Hells Canyon Dam?
10. What would be the effect on reservoir fish species if anadromous fish populations increased downstream? What would be the economic tradeoffs between the two ecosystems?

Scope:

Anadromous salmonids occur currently from the Hells Canyon Dam to the mouth of Captain John Creek. There are BLM lands from the mouth of the Salmon River to the mouth of Captain John Creek. Historic habitat is available on the following BLM lands: Cascade RA; Payette River, Weiser River - Baker RA; Powder River, Burnt River - Malheur and Jordon RA-s; Owyhee River. The scope also extends up the Salmon River drainage for all anadromous species (sockeye salmon, spring/summer chinook salmon, fall chinook salmon, steelhead, and pacific lamprey) and sturgeon. These species of fish, which spawn and rear in the Salmon River and its tributaries, migrate between the Salmon and Snake Rivers and are dependent upon the habitat and conditions in the Snake River below the Hells Canyon Dams.

Existing Guidance:

Cascade RMP (August 1987)

Pg. 53 says: On high priority streams providing habitat for species of special concern, management practices will be designed to maintain the integrity of or improve those habitats.

Pg. 48 says: Habitat to support viable populations of all native wildlife species present in the resource area will be maintained.

Pg. 48 says: Proposed actions which may adversely affect sensitive species will be modified to avoid adverse impacts or will provide mitigation for unavoidable adverse impacts.

Baker RMP (July 1989)

Pg. 12 says: The RMP establishes the priority of all resource allocations and specifies threatened or Endangered Species as first priority.

Pg. 12 says: The RMP identifies the Big Lookout Mtn. Geographic Unit as first priority for resource values to manage including wildlife, fisheries, watershed, recreation, range, minerals, forestry and cultural.

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Pg. 57 says: Resource condition objectives are to (1) maintain/improve habitat for fisheries management actions and to (2) monitor fish habitat conditions and trend on Connor Creek.

Chief Joseph MFP (November 1981)

Sections II-35 & II-36 specifies that management actions may include imposing use restrictions, rehabilitation of streambanks, and cooperative planning for the entire stream. It also says that Management will adhere to District watershed buffer guidelines and best management practices.®

Chief Joseph MFP Refinement (September 1985)

Fisheries/Water Quality Objectives and Sediment Budgets: Defines management objectives for fisheries in the watersheds, rivers, and streams within the Cottonwood Field Office's area of responsibility, all of which are tributary to the Snake River. The ability of the anadromous fish addressed in this plan to migrate to and from the ocean is directly impacted by the operation of the HCC.

Desired Future Condition:

Sustain and enhance native (wild) runs of Chinook Salmon and Steelhead Trout on BLM lands.

Issue: # 3 Pacific Lamprey.

What are the Effects from the HCC on Pacific Lamprey viability in the Snake River? BLM recognizes the significance of Pacific Lamprey to Native Americans.

Questions:

1. What are lamprey populations and relative distribution in the Snake River below Hells Canyon Dam, the Salmon River, Imnaha River, and Grande Ronde River?
2. How do flow fluctuations, water temperatures, and the loss of sand substrate affect lamprey life stages when they are in the river systems?

Scope:

Pacific Lamprey occur from the Hells Canyon Dam to the mouth of Captain John Creek. There are BLM lands from the mouth of the Salmon River to the mouth of Captain John Creek. There may be additional historic habitat on other BLM lands.

Existing Guidance:

Cascade RMP (August 1987)

On high priority streams providing habitat for species of special concern, management practices will be designed to maintain the integrity of or improve those habitats.

Pg. 48 says: Habitat to support viable populations of all native wildlife species present in the resource area will be maintained.

Pg. 48 says: Proposed actions which may adversely affect sensitive species will be modified to avoid adverse impacts or will provide mitigation for unavoidable adverse impacts.

Baker RMP (July 1989)

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BLM Policy

Manual 6840 provides policy and guidance to conserve the species and their ecosystems and to ensure that actions authorized on BLM administered lands do not contribute to the need to list any other species. This is based on the following authorities:

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Departmental Manual 235.1.1.A., general Program Delegation, Director, Bureau of Land Management.

Additional Requirements:

PACFISH- Adopted Feb 1995

INFISH- Adopted Feb 1995

Provide interim aquatic conservation strategies to ensure BLM & USFS actions conserve aquatic resources and avoid additional federal listings of endangered species

Biological assessments for all BLM land use plans in the are of listed Chinook Salmon, Steelhead and Bull trout were submitted and subsequent biological opinions received from FWS and NMFS that provide specific terms and conditions for the management and recovery of the listed species.

Desired Future Conditions:

Sustain and enhance populations and habitat for Pacific Lamprey.

Issue: # 4 Red band trout populations and habitat.

What are the effects from the Hells Canyon Complex on red band trout viability and habitat in the Snake River and its tributaries?

Questions:

Within Complex

1. What are the relative abundance, age, size, and distribution of red band trout?
2. What are the effects of reservoir drawdowns on resident fish habitat?
3. Can fish access tributary habitat with reservoir drawdown fluctuations, fluctuating mainstream river levels, and the slope of debris fans?
4. What is the interaction between native and introduced resident fish species in the reservoirs?
5. How have red band trout genetic interactions changed with the completion of HCC?
6. Do red band trout utilize the reservoirs and for what part of their life cycle?
7. What is the economic value (both commercial and non commercial) of selected aquatic species (red band trout and others) within the complex?
8. Since the development of the reservoirs, what have been the factors that influence change in fishing activities within the complex? What affect has this had on the local communities (economic activity)?

Main Stem Snake River and Tributaries below Hells Canyon Dam (Salmon River to Captain John Creek

1. What are the relative abundance, age, size, and distribution of red band trout?
2. What are the effects of flow fluctuations and changes in water temperatures on red band trout in the mainstream of the Snake River and tributaries below Hells Canyon Dam?
3. What are the habitat conditions for red band trout and other native species of the mainstream of the Snake River below Hells Canyon Dam?
4. What are the habitat conditions of the tributaries above and below Hells Canyon Dam?
5. Can fish access tributary habitat with fluctuating mainstream river levels and the slope of debris fans?
6. When do red band trout utilize the mainstream of the Snake River?
7. What is the economic value (both commercial and non commercial) of selected aquatic species (red band trout and others) along the main stem?
8. Since the development of the dams, what have been the factors that influence change in fishing activities along the main stem? What affect has this had on the local communities (economic activity)?

Scope:

Red band trout occur throughout the Snake River and its tributaries where its habitat components are intact.

Existing Guidance:

Cascade RMP (August 1987)

On high priority streams providing habitat for species of special concern, management practices will be designed to maintain the integrity of or improve those habitats.

Pg. 48 says: Habitat to support viable populations of all native wildlife species present in the resource area will be maintained.

Pg. 48 says: Proposed actions which may adversely affect sensitive species will be modified to avoid adverse impacts or will provide mitigation for unavoidable adverse impacts.

Baker RMP (July 1989)

Pg. 12 says: The RMP identifies the Big Lookout Mtn. Geographic Unit as first priority for resource values to manage including wildlife, fisheries, watershed, recreation, range, minerals, forestry and cultural.

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Fisheries/Water Quality Objectives and Sediment Budgets: Defines management objectives for fisheries in the watersheds, rivers, and streams within the Cottonwood Field Office's area of responsibility, all of which are tributary to the Snake River. The ability of the anadromous fish addressed in this plan to migrate to and from the ocean is directly impacted by the operation of the HCC.

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Additional Requirements:

PACFISH- Adopted Feb 1995

INFISH- Adopted Feb 1995

Provide interim aquatic conservation strategies to ensure BLM & USFS actions conserve aquatic resources and avoid additional federal listings of endangered species

Biological assessments for all BLM land use plans in the area of listed Chinook Salmon, Steelhead and Bull trout were submitted and subsequent biological opinions received from FWS and NMFS that provide specific terms and conditions for the management and recovery of the listed species.

Desired Future Conditions:

Sustain and enhance habitat and populations for red band trout.

Issue: # 5 Flow fluctuations.

How are changes in flow regimes from dam operations altering the aquatic resources in the project area?

Questions:

1. How are flow fluctuations affecting reproduction of native fish in the project area?
2. How do changes in velocity and depths caused by flow fluctuations affect aquatic species?
3. How have flow fluctuations affected the riparian communities along the river?
4. How do flow fluctuations, daily and annually effect beach erosion? At what flow does terrace erosion begin?
5. What have been the effects of changing flow regimes on recreation use (boating and trails) of the river?
6. What are the safety concerns resulting from daily flow fluctuations?
7. Is it possible to change operations of Hells Canyon Complex given the diverse uses and administration of the entire Snake River Basin?

Scope:

Flow fluctuations potentially affect aquatic resources throughout the project area. BLM lands and resources are affected in the following area:

Cascade RA- Brownlee, Oxbow and Hells Canyon Pools.

Baker RA- Brownlee, Oxbow, Hells Canyon Pools and Snake River from the WA state line to the mouth of Grand Ronde River.

Cottonwood RA- Scattered lands from the mouth of the Salmon River to the mouth of Captain John Creek.

Existing Guidance:

Cascade RMP (August 1987)

Pg. 53 says: In those areas where fishery/riparian values are identified as high priority habitats such as perennial/intermittent streams with high potential, habitats with game species or Aspecies of special concern,@ areas of high public visibility, unique or previous undisturbed habitats, and those habitats with high manageability potential, all other management practices will be designed to maintain the integrity of or improve these habitats.

Baker RMP (July 1989)

Pg 16 says: Management actions with riparian areas will include measures to protect or restore natural functions, as defined by executive orders 11988 and 11990 and the Oregon/Washington Riparian Enhancement Plan (1987).

Pg. 32 says: Soils will be managed to maintain productivity and minimize erosion. Those watersheds, or portions of watersheds where potential for either significant improvement or further degradation exists will be intensively managed to improve the soil, water and air resources.

Chief Joseph MFP (November 1981)

Sections II-35 & II-36 specifies that management actions may include imposing use restrictions, rehabilitation of streambanks, and cooperative planning for the entire stream. It also says that Management will adhere to District watershed buffer guidelines and best management practices.®

Chief Joseph MFP Refinement (September 1985)

Fisheries/Water Quality Objectives and Sediment Budgets: Defines management objectives for fisheries in the watersheds, rivers, and streams within the Cottonwood Field Office's area of responsibility, all of which are tributary to the Snake River. The ability of the anadromous fish addressed in this plan to migrate to and from the ocean is directly impacted by the operation of the HCC.

Desired Future Condition:

To establish and implement flow regimes which maintain key aquatic habitats for special status species.

Issue: # 6 Sediment.

How have altered flows and reduced sediment (due to the operation of the Hells Canyon Complex) affected beach erosion, terrace erosion, aquatic and riparian habitat, recreation opportunities, and cultural resources?

Questions:

1. How have changes in sediment regimes and loss of sand bar habitat affected the riparian community?
2. Are flow fluctuations and changes in sediment transport eroding sand bars and terraces and what is the rate of erosion?
3. Do tributary channels below Hells Canyon Dam provide adequate recruitment of spawning gravels or sand for sand bar renewal?
4. How do flow fluctuations and changes in sediment transport affect gravel recruitment?
5. At What flow does terrace erosion begin?
6. Are there changes in dam operation that can be implemented to slow that rate of sand bar loss and terrace erosion?
7. What is the sediment budget inflow and outflow to the Hells Canyon Complex?
8. What is the predicted rate of beach and terrace erosion in the future?
9. How have changes in sediment regimes and loss of sand bars affected recreation use in the river corridor? Is sand bar loss shifting recreation use to adjacent terraces?
10. If there is a shift in recreation use, how is this affecting heritage resources along the river? What have been the visual effects of sand bar erosion?

Scope:

Sediment transport is potentially affected throughout the length of the project area from Weiser to the mouth of Captain John Creek.

BLM lands involved include:

Cascade RA- Brownlee, Oxbow and Hells Canyon Pools.

Baker RA- Brownlee, Oxbow, Hells Canyon Pools and Snake River from the WA state line to the mouth of Grande Ronde River.

Cottonwood RA- Scattered lands from the mouth of the Salmon River to the mouth of Captain John Creek.

Existing Guidance:

Cascade RMP (August 1987)

Pg. 53 says: In those areas where fishery/riparian values are identified as high priority habitats such as perennial/intermittent streams with high potential, habitats with game species or Aspecies of special concern,@areas of high public visibility, unique or previous undisturbed habitats, and those habitats with high manageability potential, all other management practices will be designed to maintain the integrity of or improve these habitats.

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Desired Future Conditions:

To provide a flow and sediment regime which maintains/enhances the desired physical and biological characteristics of the Snake River Canyon within the project area.

Issue: #7 Sturgeon.

What are the effects of the Hells Canyon complex on sturgeon in the Snake River from Weiser to the mouth of the Captain John Creek.

Questions:

1. What are the sturgeon population numbers and relative distribution in the Snake River?
2. Do dam operations (flow and temperature) affect sturgeon populations and distribution?
3. What core habitat needs to maintain white sturgeon viability?
4. How can sturgeon habitat be improved?
5. Is the diversity and distribution of macro invertebrates adequate to sustain or enhance sturgeon populations?

Scope:

Sturgeon occur throughout the Hells Canyon Complex from the Weiser River to the mouth of Captain John Creek.

BLM lands involved include:

Cascade RA- Brownlee, Oxbow and Hells Canyon Pools.

Baker RA- Brownlee, Oxbow, Hells Canyon Pools and Snake River from the WA state line to the mouth of Grande Ronde River.

Cottonwood RA- Scattered lands from the mouth of the Salmon River to the mouth of Captain John Creek.

Existing Guidance:

Cascade RMP (August 1987)

Pg. 53 says: In those areas where fishery/riparian values are identified as high priority habitats such as perennial/intermittent streams with high potential, habitats with game species or Aspecies of special concern,@ areas of high public visibility, unique or previous undisturbed habitats, and those habitats with high manageability potential, all other management practices will be designed to maintain the integrity of or improve these habitats.

Pg. 48 says: Habitat to support viable populations of all native wildlife species present in the resource area will be maintained.

Pg. 48 says: Proposed actions which may adversely affect sensitive species will be modified to avoid adverse impacts or will provide mitigation for unavoidable adverse impacts.

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Pg. 19 says: The RMP specifies no action will be taken by BLM that could jeopardize the continual existence of any federally listed, threatened or endangered plant or animal

species. Furthermore it says, avoid management actions which may result in distribution and adverse impacts on critical habitat for listed and sensitive species.

Pg. 57 says: Resource condition objectives are to (1) maintain/ improve habitat for fisheries management actions, and to (2) monitor fish habitat conditions and trend on Connor Creek.

Chief Joseph MFP (November 1981)

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BLM Policy

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Additional Requirements:

PACFISH- Adopted Feb 1995

INFISH- Adopted Feb 1995

Provide interim aquatic conservation strategies to ensure BLM & USFS actions conserve aquatic resources and avoid additional federal listings of endangered species

Biological assessments for all BLM land use plans in the area of listed Chinook Salmon, Steelhead and Bull trout were submitted and subsequent biological opinions received from FWS and NMFS that provide specific terms and conditions for the management and recovery of the listed species.

Desired Future Conditions:

Sustain and enhance sturgeon populations and habitat on BLM lands.

Issue: # 8 Water Quality.

The effects of the Hells Canyon Complex along with dam operations and reservoir drawdown may result in water quality that does not fully support the resources managed by BLM in Brownlee, Hells Canyon reservoirs and the Snake River below Hells Canyon (HCC) Dam.

Questions:

1. What are the water quality pollutants to the Hells Canyon Complex reservoirs?
2. What are the pollutant sources and pollutant loads?
3. What are the effects of dam operations (seasonal drawdowns and reservoir fluctuations) on water quality within Brownlee, Oxbow, and Hells Canyon reservoirs?
4. What is the nutrient recycling and processing within the reservoirs?
5. What are the effects of dam operations on water quality in the Snake River below Hells Canyon dam?
6. What are the recreational impacts (petroleum from water craft and human waste) to water quality and aquatic resources?
7. What are the effects of dam operations and/or reservoir drawdown on temperature?
8. What are the effects of various temperature regimes on aquatic resources?
9. What is the feasibility and options of reducing pollutant loads?
10. What pollutant reductions needed to fully support beneficial uses?
11. What possible changes in dam operations can be considered to improve water temperature within the reservoir and below Hells Canyon Dam?

Scope:

Water quality is affected by the project throughout the area. BLM lands are as follows:

Cascade RA- Brownlee, Oxbow and Hells Canyon Pools.

Baker RA- Brownlee, Oxbow, Hells Canyon Pools and Snake River from the WA state line to the mouth of Grande Ronde River.

Cottonwood RA- Scattered lands from the mouth of the Salmon River to the mouth of Captain John Creek.

Existing Guidance:

Cascade RMP (August 1987)

Pg.45 says: Water quality will be maintained or improved in accordance with State and Federal Standards.

Baker RMP (July 1989)

Pg. 32 says: Comply with EPA and DEQ requirements on water quality monitoring and non-point source pollution reductions as those regulations become established. Manage for water quality improvement to meet riparian objectives.

Chief Joseph MFP (November 1981)

Sections II-35 & II-36 specifies that management actions may include imposing use restrictions, rehabilitation of streambanks, and cooperative planning for the entire stream.

It also says that Management will adhere to District watershed buffer guidelines and best management practices.®

Chief Joseph MFP Refinement (September 1985)

Fisheries/Water Quality Objectives and Sediment Budgets: Defines management objectives for fisheries in the watersheds, rivers, and streams within the Cottonwood Field Office's area of responsibility, all of which are tributary to the Snake River. The ability of the anadromous fish addressed in this plan to migrate to and from the ocean is directly impacted by the operation of the HCC.

Desired Future Condition:

Provide water quality that supports the resources managed by BLM in the HCC reservoirs and the Snake river below Hells Canyon Dam.

CULTURAL RESOURCE AND PALEONTOLOGICAL ISSUES

Issue: # 1 Effects of cumulative impacts to discovered and undiscovered cultural properties and paleontological localities from construction and operation/maintenance of transmission line corridors and access routes.

Questions:

1. What is the geographic area of potential effects?
2. What cultural properties are present and likely to occur in or adjacent to the transmission line corridors and primitive or improved access routes?
2. What are the effects to properties located on or adjacent to access routes?
3. What is the condition of properties on BLM lands?
4. What are the public, tribe and information values of cultural properties? What is the National Register eligibility of properties on BLM lands?
5. What cultural properties are located within, or adjacent to, the transmission line right-of-way corridor and what impacts to them result from the operation and maintenance of the transmission line?
6. What traditional cultural properties, ethnohabitats or rural historic landscapes are located in or adjacent to the transmission line corridor and what impacts to them result from operation and maintenance of the transmission lines and access routes? (Ethnohabitats are described in the Interior Columbia Basin Ecosystem Management Project reports.)
7. Since the development of transmission corridors what have been the factors that influence change in the condition and integrity of cultural resources affected and what changes have occurred?
8. What is the potential for off-site mitigation of impacts to cultural properties?
9. What Tribe information exists and will be incorporated, including identification of the area of potential effects, identification and inventory for cultural properties, evaluation, protection, mitigation and enhancement measures, and long term management of cultural properties?
10. What is the effect on the archaeological and cultural landscape?
11. What scientifically important paleontological resources and localities are located on lands in the transmission line corridors? How are paleontological resources and localities effected by operation and maintenance of transmission line corridors and access routes?

Scope:

Cultural properties are found in and adjacent to all transmission line corridors and access routes to these corridors on BLM lands associated with the Hells Canyon complex power projects. Transmission line corridor (FERC withdrawal power project #2261) including access roads. BLM lands adjacent to the Snake River from the Salmon River to Captain John Creek (Cottonwood Field Office).

Existing Guidance:

Baker Resource Management Plan (RMP) (July 1989)

Pg 12: RMP establishes the priority of all resource allocations and specifies Cultural Resources as a high priority. The Lookout Mountain Geographic Unit is identified as a first priority for managing resource values including cultural.

Pg 41-43: RMP says protect and maintain all National Register eligible properties; prepare cultural resource management plan for priority management areas and important properties; preserve important cultural properties through protection projects and actions; and evaluate potential areas or districts for National Register eligibility; continue information and education programs for protection of cultural resources; and protect cultural resource properties through monitoring. The RMP says coordinate management and protection plans with public interest groups, SHPO and Native American tribes.

Pg 50: RMP says that inventories for paleontological resources will be conducted in connection with individual project proposals; and localities containing vertebrate fossils and paleontological resources which may provide important scientific information will receive priority for protection and evaluation.

Pg 57: RMP says identify uses for specific cultural properties in activity plans, inventory and evaluate properties; protect by avoiding impacts from surface disturbing activities; and coordinate management of cultural properties with other resource activity plans.

Additional management actions identified in the RMP by geographic area for cultural properties include inventory and evaluate cultural resources, monitor the condition of vulnerable cultural resources, develop and implement cultural resource plans for historic and archaeological properties, and evaluate cultural resources for National Register nomination.

Cascade Resource Management Plan (August 1987)

Pg 6: The RMP will identify areas for special designation and management (ACEC, National Register of Historic Places and Research Natural Areas).

Pg 7: The RMP will provide for management and protection of these resources (cultural and paleontologic) at generally the same level in all alternatives unless future information, policy, or public concerns dictate otherwise.

Pg 30: RMP says protect through special designation and management, areas with significant cultural values. Surface and sub-surface rights-of-ways will be routed to avoid cultural sites.

Pg 42: RMP says exchanges will not be considered that would dispose of significant cultural, Paleontologic or recreation resources.

Pg 55: RMP says the BLM is required to identify, evaluate, protect and wisely manage cultural resources on public lands under its jurisdiction and to ensure that Bureau-initiated or Bureau-authorized actions do not inadvertently harm or destroy nonfederal cultural resources.

Pg 64: RMP says the protection of resources with significant recreation, wildlife, cultural, historical, and paleontologic values is consistent with the respective state agency plans, policies, and programs.

Pg 65: RMP says Department of Interior approval for administrative actions will be sought for National Register of Historic Places designation.

Chief Joseph Management Framework Plan [Cottonwood Field Office] (1981)

Pg II-9: BLM will conduct inventory supplementing previous surveys to locate, identify, and evaluate properties in the impact area that may be eligible for inclusion in the National Register of Historic Places.

Pg II-47: Inventory and monitor sites within the Nez Perce-Snake River Archeological District. Prepare a Snake River Protection Plan (including the Nez Perce-Snake River Archeological District).

Pg II-48: Monitor the effects of resource actions on cultural resources on a periodic basis.

Pg II-72: Those sites not on the National Register of Historic Places or not yet determined eligible for the register will be managed to preserve their values until a determination of eligibility is obtained.

Chief Joseph MFP [Cottonwood Field Office] (1981)

BLM Policy and Authorities

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Laws mandate and guide our decisions and actions. These include: Antiquities Act of 1906; Reservoir Salvage Act of 1960; National Historic Preservation Act of 1966 (NHPA, as amended); American Indian Religious Freedom Act; Archaeological Resources Protection Act 1979; the Native American Graves Protection and Repatriation Act; National Environment Policy Act of 1969; Federal Land Policy and Management Act of 1976; and Federal Cave Resources Protection Act of 1988.

Additional Requirements:

36 CFR Part 800 Regulations (new revised)

Executive Order 13007 on Indian Sacred Sites

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Oregon BLM-SHPO Protocol Implementing National Programmatic Agreement on NHPA (Section 106 Consultation Process)

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Title 43 CFR, Subpart 1610.7-2 addresses establishment of Areas of Critical Environmental Concern for the management and protection of significant natural and cultural resources.

Title 43 CFR , Subpart 8200 addresses procedures and practices for the management of lands that have outstanding natural history values, such as fossils, which are of scientific interest.

18 USC Section 641 addresses the unauthorized collection of fossils as a type of Government property.

Secretarial Order 3104 grants to BLM the authority to issue paleontological resource use permits for lands under its jurisdiction.

Desired Future Condition for Paleontologic Localities:

Protect and evaluate scientifically important paleontological resources and localities

Desired Future Conditions for Cultural Properties:

Protect, preserve, and enhance the public, tribe, and information values of cultural resources.

Ensure consistency with Indian treaty and trust responsibilities.

Integrate Tribes= interests and participation in the protection, mitigation and enhancement of Tribe cultural properties.

Integrate Tribes= interests and participation in the long term management of Tribe cultural properties.

Mitigate effects of reservoir operation and maintenance, river level fluctuation, and recreation use on cultural properties.

Prevent and reduce vandalism and looting of cultural properties.

Protect, maintain and enhance the values of traditional cultural properties.

Provide and maintain tribe access to traditional cultural properties.

Protect and enhance ethnohabitats.

Issue: # 2 Effects of cumulative impacts to discovered and undiscovered cultural properties and paleontological localities on BLM lands from construction and operation/maintenance of reservoirs.

Questions:

1. What is the geographic area of potential effects?.
2. What is the condition of cultural properties in the area of potential effects?
3. What are the effects of dispersed and developed site recreation use and other reservoir associated uses upon discovered and undiscovered cultural properties in the Snake River canyon rim to rim from Weiser to Hells Canyon dam?
4. What are the public, tribe and information values of the cultural properties. What is the National Register eligibility of cultural properties?
5. What is the historic, prehistoric, and environmental context for cultural properties?
6. What is the effect on traditional cultural properties, ethno-habitats and potential rural historic landscapes?
7. What is the environmental history that influenced land use patterns, preservation and evidence of human occupation for the Snake River Canyon from Weiser to Hells Canyon Dam.
8. What is the geomorphological context for site location and preservation on lands adjacent to the reservoirs within the Snake River Canyon.
9. What is the potential for buried sites of significant antiquity on lands adjacent to the reservoirs? Where would such sites be located? What are the effects from developed or dispersed recreation use, and reservoir operation and maintenance on landforms with potential for buried sites?
10. What is the potential for preservation in-place, physical protection measures, and off-site mitigation of impacts or enhancement for cultural properties, including traditional cultural properties and ethno-habitats.
11. Since the development of the reservoirs what have been the factors of change and what changes have occurred in the condition and integrity of cultural properties?
12. What Tribe information exists and will be incorporated: including identification of the area of potential effects, identification and inventory for cultural properties, evaluation, and protection, mitigation and enhancement, and long term management of cultural properties?
13. What is the effect on the archaeological and cultural landscape?
14. What are the scientifically significant paleontological resources and localities on BLM lands adjacent to the reservoirs in the Snake River canyon? What are the effects of reservoir operation and maintenance, access and road maintenance and associated recreation use on paleontological resources?

Scope:

BLM lands within the Snake River canyon rim to rim from Weiser to Hells Canyon Dam; BLM lands adjacent to Hells Canyon, Oxbow, and Brownlee Reservoirs and in side canyons tributary to the Snake River.

Existing Guidance:

Baker Resource Management Plan (RMP) (July 1989)

Pg 12: RMP establishes the priority of all resource allocations and specifies Cultural Resources as a high priority. The Lookout Mountain Geographic Unit is identified as a first priority for managing resource values including cultural.

Pg 41-43: RMP says protect and maintain all National Register eligible properties; prepare cultural resource management plan for priority management areas and important properties; preserve important cultural properties through protection projects and actions; and evaluate potential areas or districts for National Register eligibility; continue information and education programs for protection of cultural resources; and protect cultural resource properties through monitoring. The RMP says coordinate management and protection plans with public interest groups, SHPO and Native American tribes.

Pg 50: RMP says that inventories for paleontological resources will be conducted in connection with individual project proposals; and localities containing vertebrate fossils and paleontological resources which may provide important scientific information will receive priority for protection and evaluation.

Pg 57: RMP says identify uses for specific cultural properties in activity plans, inventory and evaluate properties; protect by avoiding impacts from surface disturbing activities; and coordinate management of cultural properties with other resource activity plans.

Additional management actions identified in the RMP by geographic area for cultural properties include inventory and evaluate cultural resources, monitor the condition of vulnerable cultural resources, develop and implement cultural resource plans for historic and archaeological properties, and evaluate cultural resources for National Register nomination.

Cascade Resource Management Plan (August 1987)

Pg 6: The RMP will identify areas for special designation and management (ACEC, National Register of Historic Places and Research Natural Areas).

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Pg 42: RMP says exchanges will not be considered that would dispose of significant cultural, Paleontologic or recreation resources.

Pg 55: RMP says the BLM is required to identify, evaluate, protect and wisely manage cultural resources on public lands under its jurisdiction and to ensure that Bureau-initiated or Bureau-authorized actions do not inadvertently harm or destroy nonfederal cultural resources.

Pg 64: RMP says the protection of resources with significant recreation, wildlife, cultural, historical, and paleontologic values is consistent with the respective state agency plans, policies, and programs.

Pg 65: RMP says Department of Interior approval for administrative actions will be sought for National Register of Historic Places designation.

Chief Joseph Management Framework Plan [Cottonwood Field Office] (1981)

Pg II-9: BLM will conduct inventory supplementing previous surveys to locate, identify, and evaluate properties in the impact area that may be eligible for inclusion in the National Register of Historic Places.

Pg II-47: Inventory and monitor sites within the Nez Perce-Snake River Archeological District. Prepare a Snake River Protection Plan (including the Nez Perce-Snake River Archeological District).

Pg II-48: Monitor the effects of resource actions on cultural resources on a periodic basis.

Pg II-72: Those sites not on the National Register of Historic Places or not yet determined eligible for the register will be managed to preserve their values until a determination of eligibility is obtained.

Chief Joseph MFP [Cottonwood Field Office] (1981)

BLM Policy and Authorities

BLM Cultural Resource Manual 8100 provides policy and guidance to recognize public and scientific uses of cultural resources and manage resources so that these uses and values are maintained and enhanced; and protect and preserve in place representative examples of full array of cultural resources.

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Laws mandate and guide our decisions and actions. These include: Antiquities Act of 1906; Reservoir Salvage Act of 1960; National Historic Preservation Act of 1966 (NHPA, as amended); American Indian Religious Freedom Act; Archaeological Resources Protection Act 1979; the Native American Graves Protection and Repatriation Act; National Environment Policy Act of 1969; Federal Land Policy and Management Act of 1976; and Federal Cave Resources Protection Act of 1988.

Additional Requirements:

36 CFR Part 800 Regulations (new revised)

Executive Order 13007 on Indian Sacred Sites

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Title 43 CFR, Subpart 1610.7-2 addresses establishment of Areas of Critical Environmental Concern for the management and protection of significant natural and cultural resources.

Title 43 CFR, Subpart 8200 addresses procedures and practices for the management of lands that have outstanding natural history values, such as fossils, which are of scientific interest.

18 USC Section 641 addresses the unauthorized collection of fossils as a type of Government property.

Secretarial Order 3104 grants to BLM the authority to issue paleontological resource use permits for lands under its jurisdiction.

Desired Future Condition for Paleontologic Localities:

Protect and evaluate scientifically important paleontological resources and localities

Desired Future Conditions for Cultural Properties:

Protect, preserve, and enhance the public, tribe, and information values of cultural resources.

Ensure consistency with Indian treaty and trust responsibilities.

Integrate Tribes=interests and participation in the protection, mitigation and enhancement of Tribe cultural properties.

Integrate Tribes=interests and participation in the long term management of Tribe cultural properties.

Mitigate effects of reservoir operation and maintenance, river level fluctuation, and recreation use on cultural properties.

Prevent and reduce vandalism and looting of cultural properties.

Protect, maintain and enhance the values of traditional cultural properties.

Provide and maintain tribe access to traditional cultural properties.

Protect and enhance ethnohabitats.

Issue: # 3 Effects of cumulative impacts to traditional cultural properties from operation and maintenance of transmission line corridors, access routes and reservoirs.

Questions:

1. What is the area of potential effects for traditional cultural properties as defined by Tribes? What traditional cultural properties are present in the area of potential effects? What tribes have traditional cultural properties in the area of potential effects?
2. What is the nature, scope and values of traditional cultural properties as identified by the Tribes.
3. What is the geographic area of traditional cultural properties affected by transmission line corridors, access routes, and reservoir operation and maintenance?
4. What is the ethnographic and ethnohistoric context for the Snake River canyon and adjacent uplands. What is this historic context from the Tribes= perspective?
5. What are the impacts to traditional cultural properties and ethno-habitats from operation and maintenance of transmission line corridors, access routes and reservoirs? What is the sensitivity and vulnerability of these properties? What are the factors of change or impact to traditional cultural properties as defined by Tribes? What are the change agents?
6. What tribes will be involved and consulted regarding traditional cultural properties?
7. What Tribes= information and data exists on the area of potential effects, identification and inventory for cultural properties, evaluation, and protection, mitigation and enhancement measures.
8. What are the effects of dispersed and developed (existing and planned) recreation upon traditional cultural properties, including ethnohabitats?
9. What is the potential for preservation in place and off-site mitigation of impacts or enhancement for traditional cultural properties and ethnohabitats.

Scope:

Cultural properties located on BLM lands within the adjacent uplands and rim to rim of Snake River Canyon from Weiser to the Salmon River/Snake River confluence, and to Captain John Creek on the Snake .

Existing Guidance:

Baker Resource Management Plan (RMP) (July 1989)

Pg 12: RMP establishes the priority of all resource allocations and specifies Cultural Resources as a high priority. The Lookout Mountain Geographic Unit is identified as a first priority for managing resource values including cultural.

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Pg 57: RMP says identify uses for specific cultural properties in activity plans, inventory and evaluate properties; protect by avoiding impacts from surface disturbing activities; and coordinate management of cultural properties with other resource activity plans. Additional management actions identified in the RMP by geographic area for cultural properties include inventory and evaluate cultural resources, monitor the condition of vulnerable cultural resources, develop and implement cultural resource plans for historic and archaeological properties, and evaluate cultural resources for National Register nomination.

Cascade Resource Management Plan (August 1987)

Pg 6: The RMP will identify areas for special designation and management (ACEC, National Register of Historic Places and Research Natural Areas).

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Pg 42: RMP says exchanges will not be considered that would dispose of significant cultural, Paleontologic or recreation resources.

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Chief Joseph Management Framework Plan [Cottonwood Field Office] (1981)

Pg II-9: BLM will conduct inventory supplementing previous surveys to locate, identify, and evaluate properties in the impact area that may be eligible for inclusion in the National Register of Historic Places.

Pg II-47: Inventory and monitor sites within the Nez Perce-Snake River Archeological District. Prepare a Snake River Protection Plan (including the Nez Perce-Snake River Archeological District).

Pg II-48: Monitor the effects of resource actions on cultural resources on a periodic basis.

Pg II-72: Those sites not on the National Register of Historic Places or not yet determined eligible for the register will be managed to preserve their values until a determination of eligibility is obtained.

Chief Joseph MFP [Cottonwood Field Office] (1981)

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are maintained and enhanced; and protect and preserve in place representative examples of full array of cultural resources.

BLM Manual 8160 (Native American Coordination) provides policy, direction and procedural guidance for consultation and coordination with Native Americans.

Laws mandate and guide our decisions and actions. These include: Antiquities Act of 1906; Reservoir Salvage Act of 1960; National Historic Preservation Act of 1966 (NHPA, as amended); American Indian Religious Freedom Act; Archaeological Resources Protection Act 1979; the Native American Graves Protection and Repatriation Act; National Environment Policy Act of 1969; Federal Land Policy and Management Act of 1976; and Federal Cave Resources Protection Act of 1988.

Additional Requirements:

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 Executive Order 13007 on Indian Sacred Sites
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 Title 43 CFR, Subpart 1610.7-2 addresses establishment of Areas of Critical Environmental Concern for the management and protection of significant natural and cultural resources.

Desired Future Conditions for Cultural Properties:

Protect, preserve, and enhance the tribe values of cultural resources.
 Ensure consistency with Indian treaty and trust responsibilities.
 Integrate Tribes=interests and participation in the protection, mitigation and enhancement of Tribe cultural properties.
 Integrate Tribes=interests and participation in the long term management of Tribe cultural properties.
 Mitigate effects of reservoir operation and maintenance, river level fluctuation, and recreation use on cultural properties.
 Prevent and reduce vandalism and looting of cultural properties.
 Protect, maintain and enhance the values of traditional cultural properties.
 Provide and maintain tribe access to traditional cultural properties.
 Protect and enhance ethnohabitats.

Issue: # 4 Effects of flow regulation activities, reservoir level fluctuation, and wave action on cultural properties and paleontological localities.

Questions:

1. What is the effect of reservoir level fluctuation on cultural properties (including traditional cultural properties)? What are the factors of change and what change agents affect the condition and integrity of cultural properties?
2. What is the loss of cultural properties or values due to reservoir and river flow fluctuations?
2. What is the present condition of the cultural properties?
3. What is the cumulative effect of reservoir operations on cultural properties?
4. What is the effect on buried or exposed cultural properties from recreation-related use, vandalism and theft during reservoir fluctuations?
5. Are there changes in reservoir and flow operation or protection measures that can be implemented to reduce or prevent loss of cultural properties from erosion or other change agents? What is the potential for preservation in-place or physical protection measures for cultural properties?
6. Can enhanced research and protection of cultural resources on the nearby free flowing Salmon River mitigate damage to cultural resources on the Snake River from the Hells Canyon Complex?
7. What scientifically important paleontological resources are located on BLM lands in and adjacent to the reservoirs? What are the effects of reservoir level fluctuations and wave action on paleontological resources or localities?

Scope:

BLM lands in or adjacent to reservoir margins and drawdown zone of Brownlee, Oxbow and Hells Canyon reservoirs; and the Snake River below dam system subject to river fluctuations resulting from flow regulation activities, including the Snake River National Register Archaeological District.

Existing Guidance:

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Protect, maintain and enhance the values of traditional cultural properties.

Provide and maintain tribe access to traditional cultural properties.

Protect and enhance ethnohabitats.

RECREATION ISSUES

Issue: # 1 Recreation Use.

Questions:

1. What are the effects of water fluctuations on recreation use, including erosion of beaches important to river based recreation (camp sites)?
2. What are the effects of water fluctuations on recreation site management?
3. What are the effects of water fluctuations on fishing?
4. What are the effects of recreation use on the physical environment?
5. What is the existing condition of developed recreation sites and what is needed?
6. What is the existing condition of dispersed recreation opportunities and what is needed?
7. What is the diversity of developed recreation facilities and what is needed?
8. What is the condition of the transportation infrastructure and what is needed?
9. What recreation conflicts exist between users and what fixes are needed?
10. What recreation conflicts exist with the private sector and what fixes are needed?
11. What is the current condition of recreation conflicts and law enforcement and what fixes are needed?
12. What is the potential for off site mitigation of impacts to recreation opportunities?

Scope:

Baker Resource Area manages the majority of lands adjacent to the 3 reservoirs on the Oregon side of the river. Visitation is estimated at 500,000 visitors annually. Cascade Resource Area manages the majority of lands adjacent to Brownlee and Oxbow Reservoirs on the Idaho side of the river. The BLM manages additional land adjacent to the Snake River below the Hells Canyon dams. The BLM also manages the recreation use and the majority of the land adjacent to the Salmon River, which joins the Snake River in Hells Canyon. Fluctuations in the river level of the Snake River from upstream dam operations can affect the ability of water based recreationists to get to and from the Salmon River.

Existing Guidance:

Baker RMP (July 1989)

Hells Canyon Complex falls within 6 different geographic units. The recreation resource condition objective for each is as follows:

Pg. 57 Lookout Mountain: Enhance recreation opportunities for hunting, sightseeing and hiking.

Pg. 75 Grande Ronde: Maintain scenic quality.

Pg. 80 Homestead: Maintain wilderness values of the McGraw Creek Wilderness Area and the McGraw Creek and Homestead Wilderness Study Area (WSA), Enhance opportunities for primitive recreation.

Pg. 93 Sheep Mountain: Maintain wilderness values of the Sheep Mountain WSA, enhance opportunities for primitive recreation.

Pg. 106 Blue Mountain: Maintain scenic quality, enhance opportunities for outdoor recreation.

Pg. 117 Baker County: Maintain scenic quality, enhance recreation opportunities.

Cascade RMP (August 1987)

Pg. 28 says: Provide or Enhance recreation use at 21 areas. (#4 Oxbow-Brownlee SRMA # Steck Park-CG, #6 Weiser Sand Dunes, #7 Snake River BL.

Pg. 29 says: Designate and manage Oxbow-Brownlee Special Recreation Management Area (SRMA) 40,000 acres. Designate area as Limited to OHV travel (to existing or designated roads and trails).

Chief Joseph MFP (November 1981)

Sections II-36 & II-79 classifies the public land along the Snake River as Semi-Primitive Motorized under the Recreation Opportunity Spectrum Classification system. These lands are to be managed with only subtle modifications, limited and small areas of disturbance, and only small, isolated structures. The frequency of contacts between recreational groups should be low to moderate.

BLM Policy

BLM Manual 8300 Objectives: The objectives of the Bureau's outdoor recreation program are to:

- (1) provide a broad spectrum of resource-dependent recreation opportunities to meet the needs and demands of public land visitors,
- (2) foster agency-wide efforts to improve service to the visiting public,
- (3) maintain high quality recreation facilities to meet public needs and enhance the image of the agency,
- (4) improve public understanding and support of the Bureau by effectively communicating the agency's multiple use management programs to the recreation visitor.

Additional Requirements:

BLM Manual 8365 Visitor Safety and Hazards. Manage recreation lands in such a manner which will protect the health, safety, and comfort of the public and preserve and protect natural resources and values; and to provide protection for the Government from unjustified tort claims.®

BLM Manual 8366 Site Management. Assure that all recreation sites are operated and maintained so that:

- 1) The public receives the maximum recreation benefits from the facilities,
- 2) Natural and cultural resources are not destroyed through over-use,
- 3) Public and employee health and safety are not endangered while on site,
- 4) The facilities are maintained so that they last for their designed life expectancies.

Desired Future Conditions:

Provide accessible recreation facilities to meet recreation demands and comply with accessibility legislation through the life of the license.

Maintain scenic quality and meet visual resource management objectives through the life of the license.

Provide for human health and safety on developed and undeveloped public lands.

Maintain or improve other resource values while providing for recreation opportunities.

Develop a coordinated and consistent approach to law enforcement and special uses permitting among the public land management agencies and the license holder.

TERRESTRIAL ISSUES

Issue: # 1 Terrestrial Resources

There have been significant effects to wildlife and botanical resources by changing from a free flowing riverine habitat to large, slack water impoundments.

It is important to determine how much habitat was lost and the effects on the resources. This would provide the historic condition with which existing condition could be compared against to determine losses or gains in specific habitat and to specific species.

Questions:

1. What are the landscape features and important habitats that are now absent from the ecosystem if any?
2. What is the loss of low elevation big game winter range (mule, deer, elk, bighorn sheep and mountain goats)? In acres flooded?
3. What is the loss of low elevation cliff habitat (peregrine falcon nesting habitat, bighorn sheep lambing areas)? In acres of each, nesting habitat and lambing habitat?
4. How much and what types of riparian habitats and wetlands have been lost because of flooding of the reservoirs? For example, has there been a loss of large stable, low elevation, complex riparian habitats (were there any large cottonwood galleries, mature/old willow habitat, mature/old white alder habitat, other stable riparian complexes)?
5. What historic habitats, now known to be key habitats for special status species, have been lost?
6. What has been the loss of native upland shrub lands and perennial bunch grasslands?
7. What are the effects to the terrestrial resources due to the changes in water quality and temperatures?
8. What changes has occurred to wintering species (bald eagles, waterfowl, etc.)?

Scope:

Terrestrial species impacts have occurred throughout the length of the project from Weiser to the mouth of Captain John Creek. BLM lands and resources are affected in the following areas:

Cascade RA- Brownlee, Oxbow and Hells Canyon Pools.

Baker RA- Brownlee, Oxbow, Hells Canyon Pools and Snake River from the WA state line to the mouth of Grande Ronde River.

Cottonwood RA- Scattered lands from the mouth of the Salmon River to the mouth of Captain John Creek.

Special status and other important species include bighorn sheep, bald eagle, peregrine falcon, mountain quail, lynx, several species of bats, several species of neo-tropical birds, Haplopappus,

Mac Farlands four o'clock and other plants. Other species of interest include; mule deer, elk , mountain lion, grouse etc.

Existing Guidance:

Baker RMP (July 1989)

Pg 16 says: Management actions with riparian areas will include measures to protect or restore natural functions, as defined by executive orders 11988 and 11990 and the Oregon/Washington Riparian Enhancement Plan (1987).

The Oregon Washington Riparian Enhancement Plan 1987 provides overall guidance and direction for management of riparian areas within the planning area. The overall goal of this plan is to maintain, restore or improve riparian areas to achieve a healthy and productive ecological condition for maximum long-term multiple use benefits and values.

Pg 18 says: Objectives for wildlife and fisheries habitat management will be consistent with BLM policy identified in the 1989 nationwide "Fish and Wildlife 200" plan.

Habitat Management plans (HMP) will be developed for economically important wildlife species, including mule deer, antelope, bighorn sheep and grouse. Primary emphasis of many of the plans will be to ensure the availability of palatable shrubs and thermal cover for deer on crucial winter ranges in Baker County.

Pg 55 says: Riparian - Reestablish, improve and/or maintain riparian habitat in or adjacent to seeps, springs, wet meadows and perennial streams.

Cascade RMP (August 1987)

Pg. 48 says: Habitat to support viable populations of all native wildlife species present in the resource area will be maintained.

Pg. 48 says: Proposed actions which may adversely affect sensitive species will be modified to avoid adverse impacts or will provide mitigation for unavoidable adverse impacts.

Chief Joseph MFP (November 1981)

- Craig Mountain Wildlife Management Area Habitat Management Plan (May 1982): This is a lengthy detailed plan for the management of big game, upland game, and other terrestrial wildlife by the BLM, Idaho Department of Fish & Game, and the Idaho Department of Lands. Its purpose is to protect and improve terrestrial wildlife habitat.
- Riparian Management Guidelines for the Cottonwood Resource Area (September 1985): Establishes detailed management practices for the protection and enhancement of riparian areas.

BLM Policy

BLM manual 6840 provides policy and guidance for the conservation of special status species of plants and animals as follows:

1. The BLM shall conserve T/E and special status species and the ecosystems upon which they depend and shall use existing authority in furtherance of the purposes of the ESA.
2. Ensure that all actions authorized, funded, or carried out by the BLM are in compliance with the ESA. To accomplish this, the BLM shall:
3. Cooperate with the FWS/NFWS in planning and providing for the recovery of T/E species. To accomplish this the BLM shall:

4. Retain in Federal ownership all habitat essential for the survival or recovery of any T/E species, including habitat used historically by these species.

Species Proposed for federal Listing. Species proposed for listing as T/E and proposed Critical Habitat shall be managed with the same level of protection provided for E/E species except that formal consultations are not required.

Desired Future Condition:

The BLM shall conserve and enhance all special status species and their habitat.

BLM shall ensure optimum populations and natural abundance and diversity of Wildlife and botanical resources on public lands (from BLM FY 2000).

Issue: # 2 Riparian.

Construction of the dams and the flooding of riparian and bottom land habitats reduced or eliminated high quality river riparian habitat. In addition flow fluctuations associated with both the impoundments draw downs and dam operation has further reduced the potential for the area to replace some of the lost riparian habitat.

Questions:

1. What population changes have occurred with the loss and fragmentation of these habitats? (Mountain quail, amphibians, reptiles, Neo-tropical/land birds, etc.)
2. Was there a loss in the connectivity with the disruption in the historic continuous ravine riparian system and what species are affected?
3. What is the effect of the constant change in water levels throughout the year on the existing habitats (water fluctuations on riparian species and habitats)?
4. What is the loss of riparian habitat due to reservoir and river flow fluctuations?

Scope:

Riparian impacts have occurred throughout the length of the project from Weiser to the mouth of Captain John Creek. BLM lands and resources are affected in the following areas:

Cascade RA- Brownlee, Oxbow and Hells Canyon Pools.

Baker RA- Brownlee, Oxbow, Hells Canyon Pools and Snake River from the WA state line to the mouth of Grande Ronde River.

Cottonwood RA- Scattered lands from the mouth of the Salmon River to the mouth of Captain John Creek.

Special status and other important species include bighorn sheep, bald eagle, peregrine falcon, mountain quail, lynx, several species of bats, several species of neo-tropical birds, Haplopappus,

Mac Farlands four o'clock and other plants. Other species of interest include; mule deer, elk, mountain lion, grouse etc.

Existing Guidance:

Baker RMP (July 1989)

Pg 16 says: Management actions with riparian areas will include measures to protect or restore natural functions, as defined by executive orders 11988 and 11990 and the Oregon/Washington Riparian Enhancement Plan (1987).

The Oregon/Washington Riparian Enhancement Plan 1987 provides overall guidance and direction for management of riparian areas within the planning area. The overall goal of this plan is to maintain, restore or improve riparian areas to achieve a healthy long-term multiple use benefits and values.

Cascade RMP (August 1987)Pg. 53 says: In those areas where fishery/riparian values are identified as high priority habitats such as perennial/intermittent streams with high potential, habitats with game species or Aspecies of special concern,@areas of high public visibility, unique or previous undisturbed habitats, and those habitats with high manageability

potential, all other management practices will be designed to maintain the integrity of or improve these habitats.

Chief Joseph MFP (November 1981)

- Craig Mountain Wildlife Management Area Habitat Management Plan (May 1982): This is a lengthy detailed plan for the management of big game, upland game, and other terrestrial wildlife by the BLM, Idaho Department of Fish & Game, and the Idaho Department of Lands. Its purpose is to protect and improve terrestrial wildlife habitat.
- Riparian Management Guidelines for the Cottonwood Resource Area (September 1985): Establishes detailed management practices for the protection and enhancement of riparian areas.

BLM Policy

Riparian Wetland initiative for the 1990's states, pg 15 states:

The national policy goal is to maintain, restore, or improve riparian-wetland values to achieve a healthy and proper functioning condition, for the maximum long-term benefit of the American people.

Desired Future Condition:

Maintain, restore or improve riparian areas to achieve a healthy and productive ecological condition for maximum long-term multiple use benefits and values.

Issue: # 3 Noxious Weeds.

The management of the project may be spreading the invasion of noxious weeds throughout the area. Roads, recreation use, and equipment associated with the project may be increasing the risk. Water fluctuations may be maintaining sites for noxious weed establishment.

Questions:

1. Where are the noxious weed sites located within the project area boundaries, including associated roads, recreation sites and transmission lines?
2. What is the rate of spread or potential from the existing sites onto adjoining lands?
3. What are the vectors that are causing the spread of noxious weeds?

Scope:

Noxious weeds are found throughout the project area.

Terrestrial species impacts have occurred throughout the length of the project from Weiser to the mouth of Captain John Creek. BLM lands and resources are affected in the following areas:

Cascade RA- Brownlee, Oxbow and Hells Canyon Pools.

Baker RA- Brownlee, Oxbow, Hells Canyon Pools and Snake River from the WA state line to the mouth of Grande Ronde River.

Cottonwood RA- Scattered lands from the mouth of the Salmon River to the mouth of Captain John Creek.

Special status and other important species include bighorn sheep, bald eagle, peregrine falcon, mountain quail, lynx, several species of bats, several species of neo-tropical birds, Haplopappus, Mac Farlands four o'clock and other plants. Other species of interest include; mule deer, elk, mountain lion, grouse etc.

Existing Guidance:

Baker RMP (July 1989)

Pg. 50 states: Control of noxious will be conducted in accordance with the Northwest Area Noxious weed Area control EIS.

Cascade RMP (August 1987)

Noxious weed control will be conducted in accordance with integrated weed management guidelines and design features identified in the Northwest Area Noxious Weed Control Program Final Environmental Impact Statement of December, 1985. The Idaho State Director issued a Record of Decision on April 7, 1986 for this program.

Chief Joseph MFP (November 1981)

— Craig Mountain Wildlife Management Area Habitat Management Plan (May 1982):
This is a lengthy detailed plan for the management of big game, upland game, and

other terrestrial wildlife by the BLM, Idaho Department of Fish & Game, and the Idaho Department of Lands. Its purpose is to protect and improve terrestrial wildlife habitat.

- Riparian Management Guidelines for the Cottonwood Resource Area (September 1985): Establishes detailed management practices for the protection and enhancement of riparian areas.

Desired Future Condition:

Reduce current infestations of Noxious weeds and prevent the spread of new and existing populations.

Issue: # 4 Effect of Recreation use on Terrestrial Species.

Recreation use, resulting from the project is potentially having a negative effect on terrestrial species.

Questions:

- 1 What is the increased recreation tied to the impoundments and what are the affects on terrestrial resources?
2. How has the road construction, maintenance and increased use and access associated with the changed recreation used affected the terrestrial species using area?
3. How has the creation of project associated human communities changed/effected terrestrial species use of the area?

Scope:

Terrestrial species impacts have occurred throughout the length of the project from Weiser to the mouth of Captain John Creek. BLM lands and resources are affected in the following areas:

Cascade RA- Brownlee, Oxbow and Hells Canyon Pools.

Baker RA- Brownlee, Oxbow, Hells Canyon Pools and Snake River from the WA state line to the mouth of the Grande Ronde River.

Cottonwood RA- Scattered lands from the mouth of the Salmon River to the mouth of Captain John Creek.

Special status and other important species include bighorn sheep, bald eagle, peregrine falcon, mt. Quail, lynx, several species of bats, several species of neo-tropical birds, Haplopappus, Mac Farlands four o'clock and other plants. Other species of interest include; mule deer, elk , mt. Lion, grouse etc.

Existing Guidance:

Baker RMP (July 1989)

Page 12 identifies crucial wildlife habitat as a management priority over recreation.

Pg 18 says: Objectives for wildlife and fisheries habitat management will be consistent with BLM policy identified in the 1989 nationwide "Fish and Wildlife 200" plan.

Habitat Management plans (HMP) will be developed for economically important wildlife species, including mule deer, antelope, bighorn sheep and grouse. Primary emphasis of many of the plans will be to ensure the availability of palatable shrubs and thermal cover for deer on crucial winter ranges in Baker County.

Cascade RMP (August 1987)

Pg. 58 says: Some areas may be subject to special restrictions to protect resources or eliminate or reduce conflicts among uses.

Chief Joseph MFP (November 1981)

- Craig Mountain Wildlife Management Area Habitat Management Plan (May 1982): This is a lengthy detailed plan for the management of big game, upland game, and other terrestrial wildlife by the BLM, Idaho Department of Fish & Game, and the Idaho Department of Lands. Its purpose is to protect and improve terrestrial wildlife habitat.
- Riparian Management Guidelines for the Cottonwood Resource Area (September 1985): Establishes detailed management practices for the protection and enhancement of riparian areas.

BLM Policy

Recreation 2000 pg. 30

Desired Future Condition:

The BLM will manage and monitor the basic natural, cultural, and scenic resources found on the public lands in a manner that assures the protection of sensitive resources and continued availability of quality outdoor recreation opportunities and experiences.

Issue: # 5 Transmission Lines.

What are the effects of transmission lines and associated access roads on terrestrial species.

Questions:

1. Has the construction and maintenance of the transmission lines and associated roads caused habitat fragmentation, degradation and introduction of noxious weeds.
2. What are the direct effects of the transmission lines, such as electrocutions and collisions by Raptors and other migratory and/or resident bird species?
3. What other affects have resulted from transmission lines to terrestrial species?

Scope:

IPC transmission lines totaling 261 miles cross BLM lands in the following areas: Cascade RA- 240 miles; Baker RA- 21miles.

Existing Guidance:

Baker RMP (July 1989)

Prior to granting or renewing a right-of-way, the applicant must submit plans, maps or other information related to the use of the proposal for evaluation by the BLM. Each right-of-way shall be limited to the area necessary for operation and maintenance, will consider the protection of public safety and ensure the use authorized will do no unnecessary damage to the environment.

Each right-of-way shall contain terms and conditions requiring compliance with environmental quality standards applicable to Federal or State law. Such terms and conditions are intended to provide efficient management of the lands subject to the right-of-way and to protect the interest of individuals living in the area as well as the public interest in the Federal lands.

Chief Joseph MFP (November 1981)

- Craig Mountain Wildlife Management Area Habitat Management Plan (May 1982): This is a lengthy detailed plan for the management of big game, upland game, and other terrestrial wildlife by the BLM, Idaho Department of Fish & Game, and the Idaho Department of Lands. It-s purpose is to protect and improve terrestrial wildlife habitat.
- Riparian Management Guidelines for the Cottonwood Resource Area (September 1985): Establishes detailed management practices for the protection and enhancement of riparian areas.
-

Desired Future Condition:

Ensure optimum populations and natural abundance and diversity of wildlife and botanical resources on public lands.

Manage transmission lines and road access to protect terrestrial wildlife and botanical resources consistent with BLM policy.

Issue: # 6 Terrestrial Wildlife.

Questions:

1. What are the impacts to terrestrial wildlife on lands adjacent to the Snake River as a result of artificial flow regimes downstream from the Hell-s Canyon dams?
2. What is the potential for off site mitigation of impacts to terrestrial wildlife and wildlife habitat?

Scope:

The BLM administers scattered public lands adjacent to the Snake River between the mouth of the Salmon River and the mouth of Captain John Creek. This involves lands managed by Cottonwood Resource Area on the Idaho side and Baker Resource Area on the Oregon side.

Existing Guidance:

Baker RMP (July 1989)

Pg 18 says: Objectives for wildlife and fisheries habitat management will be consistent with BLM policy identified in the 1989 nationwide "Fish and Wildlife 200" plan.

Habitat Management plans (HMP) will be developed for economically important wildlife species, including mule deer, antelope, bighorn sheep and grouse. Primary emphasis of many of the plans will be to ensure the availability of palatable shrubs and thermal cover for deer on crucial winter ranges in Baker County.

Chief Joseph MFP (November 1981)

Craig Mountain Wildlife Management Area Memorandum of Understanding
(Management Agreement between BLM, Idaho Dept. of Fish & Game, The Nature Conservancy, & Idaho Dept. of Lands)

Craig Mountain Wildlife Management Area Management Habitat Management Plan
MOU between the BLM and The Nature Conservancy for management of the China Garden Creek Ranch.

Desired Future Conditions:

Implement measures on the Salmon and the Grande Ronde Rivers adjacent to Hell-s Canyon to mitigate negative impacts to terrestrial wildlife and wildlife habitat as a result of the Hell-s Canyon Dam complex.

TRIBE TREATY AND TRUST RESOURCE ISSUES

Issue: # 1 Effects to tribal treaty and trust resources from impacts by power projects, transmission line and reservoir construction and operation/maintenance including down river impacts on lands and habitat. (Some examples of trust resources include but are not limited to: cultural resource landscapes and ethnohabitats, water quantity and quality, fish and wildlife habitat, and cultural plants. Ethnohabitats are described by the Interior Columbia Basin Ecosystem Management Project).

Questions:

1. What are the Tribes= rights, interests, issues and concerns for treaty and trust resources?
2. What are the cumulative effects of power project operation and maintenance on treaty rights, interests, trust resources, Tribe economic and cultural heritage maintenance?
3. How will Tribes= rights and concerns be incorporated into protection, mitigation and enhancement measures and future management for treaty and trust resources and interests?
4. What is the potential for project area and off-site protection, mitigation of impacts, or enhancement of treaty and trust resources and interests?

Scope:

Treaty rights and trust resources and interests on ceded and aboriginal lands in Oregon, Washington, and Idaho. BLM has trust responsibility for lands and resources within these areas. BLM-administered lands are located in adjacent uplands crossed by transmission line corridors; and rim to rim in the Snake River canyon from Weiser, Idaho to the mouth of the Grande Ronde River in Washington, and Captain John Rapids on the Snake River.

Authorities and Policy

BLM has a trust responsibility to consult with Tribes on treaty and trust resources and interests. Consultation is required by policy and multiple laws and mandates. These include, but are not limited to:

Treaties with Native American Tribes

Executive Order 13084 on Consultation and Coordination with Indian Tribal Governments

Executive Order 12898 on Environmental Justice

Executive Order 13007 on Indian Sacred Sites

Executive Order 11593 on Protection and Enhancement of Cultural Environment

National Environment Policy Act

Federal Land Policy and Management Act

National Historic Preservation Act

American Indian Religious Freedom Act

Archaeological Resources Protection Act

BLM Manual 8160 (Native American Coordination) which identifies policy, direction and procedural guidance to BLM for coordination and consultation with Native Americans.

Desired Future Condition:

Ongoing government-to-government consultation with Tribes.

Coordinated and integrated federal agency consultation with Tribes.
Protect, maintain and enhance treaty and trust resources for present and future generations.

VISUAL QUALITY AND AESTHETIC ISSUES

Issue: # 1 Visual Quality and Aesthetics.

Questions:

1. What are the effects of water fluctuations from dam operations on visual quality?
2. What are the effects of heavy recreation use on visual quality?
3. What are the effects of dam operations and related structures on visual quality?
4. What are the effects of uncontrolled OHV use on visual quality?
5. What are the effects of transmission lines and related roads on visual quality?
6. What is the potential for off site mitigation of impacts to visual resources?

Scope:

The majority of the lands adjacent to the 58-mile long Brownlee Reservoir on both the Oregon and Idaho side are managed by BLM. Much of the land adjacent to Oxbow and Hells Canyon Reservoirs are also managed by BLM. Most of this was designated as VRM Class II during the respective RMP processes. The BLM manages some public land adjacent to the Snake River below the HCNRA that may be impacted by the operations of the Hells Canyon dams. The BLM manages the majority of the lands along the Salmon River and the recreation use on the Salmon. A transmission line (230 KV) from Hells Canyon Dam crosses the Salmon River and public lands adjacent to the river.

Existing Guidance:

Baker RMP (July 1989)

Hells Canyon Complex falls within 6 different geographic units. The recreation resource condition objective related to visual resource management for each is as follows:

Pg. 57 Lookout Mountain: Maintain scenic quality.

Pg. 75 Grande Ronde: Maintain scenic quality.

Pg. 80 Homestead: Maintain wilderness values of the McGraw Creek Wilderness Area and the McGraw Creek and Homestead Wilderness Study Area (WSA), maintain scenic quality.

Pg. 93 Sheep Mountain: Maintain wilderness values of the Sheep Mountain WSA, maintain scenic qualities.

Pg. 117 Baker County: Maintain scenic quality.

Pg. 106 Blue Mountain: Maintain scenic quality

Cascade RMP (August 1987)

Pg. 59 says: The visual or scenic values of the public lands will be considered whenever any physical actions are proposed on the BLM lands.

Chief Joseph MFP (November 1981)

Pg. II-37 Generally defines VRM Class II.

Pg. II-38 Specifies that in VRM Class II designations, structures must incorporate the natural lines, colors, form, and material of the landscape. When viewed from key observation points, structures will not appear skylined. Structures should take advantage

of all opportunities for concealment. Large powerlines such as 230 and 500 KV will not generally be allowed.

Pg. II-79 Designates the Salmon River canyon as VRM Class II. The lower Salmon River is proposed, and qualifies, as a Scenic River component of the Wild and Scenic River System.

BLM Policy

FLPMA places scenic resources on an equal basis with other resources. It also makes inventorying and managing scenic and other environmental values an explicit criterion that must be applied throughout the land management activities of the Bureau. It is Bureau policy that visual resource considerations be included in environmental assessments, in land use planning decisions, and in the implementation of resource projects. Visual design considerations shall be incorporated into all surface disturbing projects regardless of size or potential impact. (BLM Manual 8400)

Additional Requirements:

National Environmental Policy Act of 1969, 43 USC 4321 et. seq.,: Section 101(b). Requires measure be taken to assure for all Americans...esthetically pleasing surroundings.

Instruction Memorandum No. 98-164 When VRM is addressed during the RMP process, and VRM management decisions are made, the implementation of those decisions is mandated just as they are for any other resource allocation decisions. (From a recent court case)

BLM Manual 8400 Visual Resource Management. Describes BLM's VRM classes and process.

Desired Future Conditions:

Manage dam, reservoir and transmission line operations, recreation use, and related uses consistent with BLM visual resource decisions and policy.

ICBEMP Science Assessment Findings Pertinent to Hells Canyon Complex Relicensing

Following is a list of broad-scale conditions in the interior Columbia River Basin documented in the ICBEMP Scientific Assessment (Quigley and Arbelbide 1997) and EIS.

Rangelands

- \$ Noxious weeds are spreading rapidly, and in some cases exponentially, on rangelands in every range cluster.
- \$ Cheatgrass has taken over many dry shrublands, increasing soil erosion and fire frequency and reducing biodiversity and wildlife habitat. Cheatgrass and other exotic plant infestations have simplified species composition, reduced biodiversity, changed species interactions and forage availability, and reduced the systems= ability to buffer against changes.
- \$ Expansion of agricultural and urban areas on non-federal lands has reduced the extent of some rangeland potential vegetation groups, most notably dry grasslands, dry shrublands, and riparian areas. Changes in some of the remaining habitat patches and loss of native species diversity have contributed to a number of wildlife species declines, some to the point of special concern (such as sage grouse, Columbian sharptail grouse, California bighorn sheep, pygmy rabbit, kit fox, and Washington ground squirrel).
- \$ Increased fragmentation and loss of connectivity within and between blocks of habitat, especially in shrub steppe and riparian areas, have isolated some habitats and populations and reduced the ability of populations to move across the landscape, resulting in long-term loss of genetic interchange.
- \$ Slow-to-recover rangelands (in general, rangelands that receive less than 12 inches of precipitation per year) are not recovering naturally at a pace that is acceptable to the general public, and are either highly susceptible to degradation or already dominated by cheatgrass and noxious weeds.
- \$ Fire frequency has increased in some areas, particularly in dryer locations where exotic annual grasses have become established. Increased fire frequency has caused a loss of shrub cover and reduction in bunchgrasses.

Forests

- \$ Habitat for several forest carnivores and omnivores is in decline.
- \$ Noxious weeds are spreading rapidly, and in some cases exponentially, in most dry forest types.

Hydrology and Watershed Processes

- \$ Management activities throughout watersheds in the project areas have affected the quantity and quality of water, processes of sedimentation and erosion, and the production and distribution of organic material, thus affecting hydrologic conditions.

Source Habitat

- \$ Source habitats for the majority of species in the basin declined strongly (>20 percent decline) from historical to current.
- \$ The strongest declines were for species dependent on low-elevation, old-forest habitats, species dependent on combinations of rangeland or early-seral forests with late-seral forests, and species dependent on native grassland and open canopy sagebrush habitats (Wisdom et al., in press).
- \$ Primary causes for decline in native herbland, woodland, grassland, and sagebrush habitats are excessive livestock grazing, invasion of exotic plants, and conversion of land to agriculture, residential, and urban development. Altered fire regimes have also contributed to a decline in grassland and shrubland habitats.
- \$ A variety of road-associated factors negatively affect habitats or populations of many species.
- \$ Human interactions with wide-ranging carnivores are generally negative and large areas of the basin may not be used by wide-ranging carnivores, because of this, habitats for many riparian dependent terrestrial species, especially shrubland habitats have declined.

Streams, Rivers, and Lakes

- \$ Banks and beds of streams, rivers, and lakes have been altered. In general, the changes have been greatest for the larger streams, rivers, and lakes.
- \$ Water quantity and flow rates have been locally affected.
- \$ Many Forest Service and BLM administered streams are water quality limited as defined by the Clean Water Act. On Forest Service administered lands, the primary water quality problems are sedimentation, turbidity, flow alteration, and elevated temperatures. On BLM administered lands, sedimentation, turbidity, and elevated temperatures are the primary reasons for listing as water quality limited.
- \$ Streams and rivers are highly variable across the project areas, reflecting diverse physical settings and disturbance histories. Nevertheless, important aspects of fish habitat, such as pool frequency and large woody debris abundance, have decreased throughout much of the project area.

Riparian Areas and Wetlands

- \$ The overall extent and continuity of riparian areas and wetlands has decreased.
- \$ Riparian ecosystem function, determined by the amount and type of vegetation cover, has decreased in most subbasins within the project area.
- \$ A majority of riparian areas on Forest Service and BLM administered lands are either not meeting objectives, non-functioning, or functioning at risk. However, the rate has slowed and a few areas show increases in riparian cover and large trees.
- \$ Within riparian woodlands, the abundance of mid-seral vegetation has increased, whereas the abundance of late and early seral structural states has decreased.

- \$ The frequency and extent of seasonal floodplain and wetland inundation has been altered by changes in flow regime, and by changes in channel morphology.
- \$ There is an overall decrease in large trees and late seral vegetation in riparian areas.
- \$ Riparian areas are important for about three quarters of the terrestrial wildlife species. Wildlife numbers have declined in proportion to the decline in riparian habitat conditions.

Fish

- \$ The composition, distribution, and status of fishes within the planning area are substantially different than they were historically. Some native fishes have been eliminated from large portions of their historical ranges.
- \$ Many native nongame fish are vulnerable because of their restricted distribution of fragile or unique habitats.
- \$ Although several of the key salmonids are still broadly distributed (notably the cutthroat trouts and redband trout), declines in abundance, loss of life history patterns, local extinctions, and fragmentation and isolation of smaller blocks of high quality habitat are apparent.
- \$ Wild chinook salmon and steelhead are near extinction in a major part of their remaining distribution.
- \$ Core areas for rebuilding and maintaining biological diversity associated with native fishes still exist within the basin.

Human Uses and Values

- \$ The planning area is sparsely populated and rural, especially in areas with a large amount of agency lands. Some rural areas are experiencing rapid population growth, especially those offering high quality recreation and scenery.
- \$ Development for a growing human population is encroaching on previously undeveloped areas adjacent to lands administered by the Forest Service and BLM. New development can put stress on the political and physical infrastructure of rural communities, diminish habitat for some wildlife, and increase agency costs to manage fire to protect people and structures.
- \$ Recreation is an important use of agency lands in the planning area in terms of economic value and amount of use. Most recreation use is tied to roads and accessible water bodies, though primitive and semi-primitive recreation is also important and becoming scarce relative to growing demand.
- \$ Industries customarily served by agency land uses, such as logging, wood products manufacturing and livestock grazing, no longer dictate the economic prosperity of the region, but remain economically and culturally important in rural areas. The economic dependence of communities on these industries is highest in areas that are geographically isolated and offer few alternative employment opportunities.
- \$ The public has invested substantial land and capital to develop road systems on agency lands, primarily to serve commodity uses. On forest lands, commercial timber harvest has financed 90 percent of the construction cost and 70 percent of maintenance cost. Recreation now accounts for 60 percent of the use. Trends in timber harvesting and new road management objectives make the cost of managing their road systems an issue of concern.

- \$ For those counties that have benefited from Federal sharing of gross receipts from commodity sales on agency lands, changing levels of commodity outputs can affect county budgets.
- \$ The factors that appear to help make communities resilient to economic and social change include population size and growth rate, economic diversity, social and cultural attributes, amenity setting, and quality of life. The ability of agencies to improve community resiliency depends on the effectiveness of agency land uses and management strategies to positively influence these factors.
- \$ Lands now administered by the Forest Service and BLM make up the traditional homelands of affected American Indian Tribes. Land management actions and decisions on these lands affect the rights and/or interests of these tribes and their members.
- \$ American Indian tribes in the Basin depend on lands and resources administered by the BLM and Forest Service for a myriad of needs and uses ranging from subsistence uses and economic purposes to religious and cultural purposes.
- \$ Agency social and economic policy has emphasized the goal of supporting rural communities, including tribal communities. The ability of agencies to assist tribal members and tribal communities depends on the effectiveness of agency land uses and management strategies to positively consider and influence these factors (tribal employment, subsistence, treaty/reserved rights, spiritual, cultural/social purposes).

American Indian Rights and Interests

- \$ There is low confidence and trust that American Indian rights and interest are considered when decisions are proposed and made for actions to be taken on BLM or Forest Service administered lands.
- \$ American Indian values on Federal lands may be affected by proposed actions on forestlands and rangelands because of changes in vegetation structure, composition, and density; existing roads; and watershed conditions.
- \$ Indian tribes do not feel that they are involved in the decision-making process commensurate with their legal status. They do not feel that government-to-government consultation is taking place.
- \$ Culturally significant species such as anadromous fish and the habitat necessary to support healthy, sustainable, and harvestable populations constitute a major, but not the only, concern. American Indian people have concern for all factors that keep the ecosystem healthy.